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**Article**

## Venture Capital and Business Angels and the Creation of Innovative Firms in Poland

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**LUCYNA LEWANDOWSKA \***

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**Venture Capital and Business Angels and the Creation of Innovative Firms in Poland**

**Abstract**

*The article discusses innovations as a strategic instrument that makes firms and the economy more competitive and drives GDP growth. It shows that their creation is determined by the micro- and macroeconomic factors, including the technical, institutional, legislative and capital infrastructure, etc., that comprise the business environment.*

*Special attention is given to private equity and venture capital funds and business angels that are the most interesting types of investors funding risky innovation projects. As well as making funds available, they offer their knowledge, know-how, business contacts and active involvement in the projects they decide to fund. Their nature makes them a perfect vehicle, capable of both stimulating innovation activity and earning relatively high rates of return on the investors' capital.*

*The article also points out that conditions fostering further development of the described types of entrepreneurship and innovation financing and a dynamic environment generating innovative capacity should be created.*

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## 1. Introduction

Market laws drive the economy towards competitiveness that emphasises pro-innovative development. At the same time, the concepts of a knowledge-based economy make firms, universities and societies take up serious challenges. These factors are interrelated.

Limited competitiveness of the economy is usually caused by its low level of innovation that appears when the scientific and economic organizations tend not to exchange knowledge and when institutional and financial conditions supporting the knowledge exchange process do not exist. Government's policy can effectively promote innovative projects by stimulating the development of legal and institutional infrastructure fostering innovation processes.

The building of a knowledge-based economy involves, above all, the formation and growth of knowledge-based enterprises. These enterprises can appear in an open environment that is responsive to changes and effectively utilizes flows of innovations owing to international networks. The small and medium-sized innovative firms cannot operate in isolation. The activities they conduct in technology parks and clusters will increase their contribution to the global economic development (glocalization) with the expanding domestic infrastructure and growing expenditures on the creation of innovative start-ups and spin-offs. This scenario follows the Lisbon Strategy and OECD's New Economy. Considering the costs of the knowledge and high-technology transfers, stronger venture capital funds financing risky innovation projects are a prerequisite for the formation of potentially very competitive innovative enterprises. Because the development of the R+D sector has long been neglected in Poland, its potential is unsatisfactory. Since 1999, the consolidation, commercialisation and winding up processes has reduced the number of R+D organizations established under the R+D organizations law from 228 to 190 units. At the same time, the number of enterprises launching R+D activities has increased from 196 to 573, but the activities are quite modest, both regarding the R+D funding (19.5% of the Gross Domestic Expenditure on Research and Development, GERD) and the R+D personnel (8% of all researchers).

In Poland, GERD oscillated around 0.56% of GDP for many years, being greater than in Slovakia, Greece, Mexico, Latvia, Bulgaria, Cyprus and Romania, but lower than in the other OECD and EU countries (the average EU rate is approx. 4.74%).

The Polish budget spends on R+D around 0.32% of the country's GDP, which represents 1.5% of the total budget. This rate is similar to the European average, but one has to bear in mind that the Polish budget is relatively small in relation to the budgets of other EU countries, where the non-budget funding

allocated to science is also larger than in Poland. Business in Poland accounts for slightly more than 33% of the R+D funding – the rate is one of the lowest in the EU (the EU average is ca. 55%).

Further, Poland has one of the highest indicators of scientific investigations unrelated to any specific socio-economic objective among the EU member states. As the economy underfunds scientific research, the sphere of practice does not generate impulses to guide basic research. This situation calls for changes that could definitely improve the economic effectiveness, rationality and the aims of science expenditures in Poland, as well as helping the country reach the level of 2% of GDP spent on science and higher education by the year 2013, as required by the Lisbon Strategy.

Poland's participation in the setting up of national strategic frameworks under the programming of EU funds for the years 2007-2013 gives the country a good opportunity for attaining some of the science, entrepreneurship and innovation financing objectives.

Although helpful, the non-repayable funds that Poland additionally obtains from the EU to boost economic development (Ślusarczyk, Szyjko 2008) do not fully meet the demand for funding reported by innovative enterprises. Therefore, external funding becomes necessary, for instance investments made by private or public investors, such as **Venture Capital funds** and **Business Angels**. The two types of investors stimulate the development of entrepreneurship and innovation that – according to P. Drucker – lead to the accumulation of wealth, irrespective of what happens to savings (Drucker 1999).

## 2. Venture Capital and the financing of innovations

Innovation viewed as a series of stages that must take place and be fulfilled to enable a financial result of an innovative technological process, of the new organization of processes and functions or of the commercialisation of a new product is not possible without innovative concepts being first generated and then practically implemented for the first time.

The stages of the process are presented in table 1.

**Table 1. Stages of innovation by type of innovating entity**

Innovating entities	Stages in project's life cycle	Stages in project development	Project's results
<ul style="list-style-type: none"> <li>• tertiary schools,</li> <li>• R+D units,</li> <li>• Polish Academy of Sciences</li> </ul>	basic research		<ul style="list-style-type: none"> <li>• research findings,</li> <li>• patents,</li> <li>• unpatented inventions,</li> <li>• original concepts</li> </ul>
<ul style="list-style-type: none"> <li>• tertiary schools,</li> <li>• R+D units,</li> <li>• economic organizations</li> </ul>	applied research		
<ul style="list-style-type: none"> <li>• R+D units,</li> <li>• economic organizations</li> </ul>	development		
<ul style="list-style-type: none"> <li>• R+D units,</li> <li>• economic organizations,</li> <li>• high-technology transfer centres</li> </ul>	implementation		commercialisation

Source: developed by the author based on K. Górak, *Strategie komercjalizacji technologii*, PARP, [http://www.ksu.parp.gov.pl/res/pl/pk/pakiety\\_informacyjne/01/01~11.doc](http://www.ksu.parp.gov.pl/res/pl/pk/pakiety_informacyjne/01/01~11.doc). (16.11.2009).

Various results of the actions undertaken by innovating organizations should lead to the transmission of the given type of knowledge and the related know-how to business practice (see the table).

P. Drucker, the entrepreneurship guru, defines innovation as a special entrepreneurial tool that provides assets with new wealth-creation opportunities. One way to finance innovation is venture capital.

**Venture capital (VC)** is private equity (Sobańska, Sieradzan 2004, p. 13) investments in enterprises at early stages of development, including expansion, or in newly formed enterprises. This term also includes seed finance that helps to test the viability of a project proposal as an underpinning of a new company. The notion of 'private equity' is more capacious than 'venture capital' (Pruchnicka-Grabias 2008, p. 58), as it encompasses venture capital (the seed, start-up and expansion stages), management buy-outs and buy-ins, and replacement capital/secondary purchases.

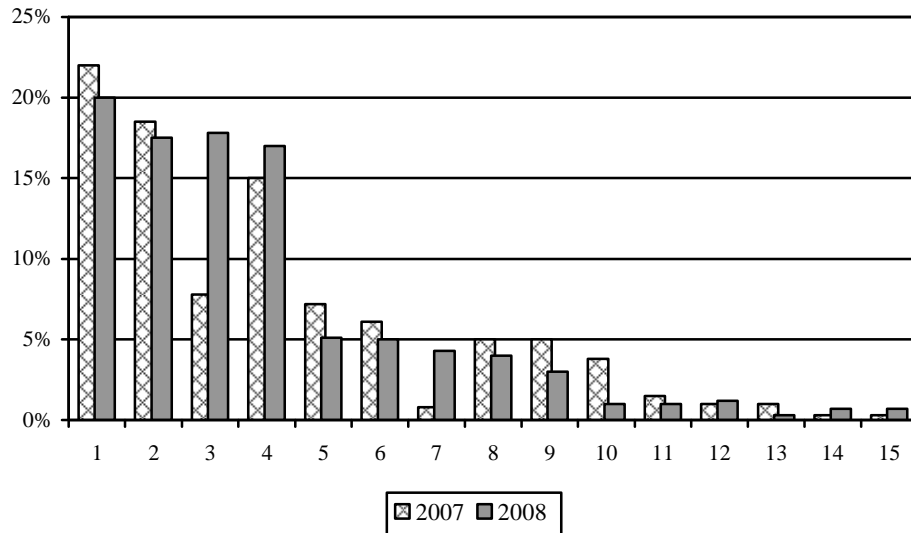
Regarding their major characteristics, venture capital funds:

- invest in very innovative and thus very profitable projects,
- expect very high rates of return on the committed capital,

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- actively co-manage the investees,
  - contribute know-how to increase the probability that the project will be successful,
  - accept projects proposed for investment based on their reliability confirmed by market analysis, high competence of the project staff and of the entrepreneur and ultimately on the expected rate of return,
  - invest for periods spanning 5-10 years and then perform disinvestment,
  - pay attention to the development stage of the project proposed by the potential investee (VC funds focus on the early stages of company growth, mainly in the SME sector),
  - introduce co-ownership for the investment period, with some potential consequences arising from the relations of the investor-investee type,
  - offer the investees management support and business contacts,
  - manage resources contributed by informal investors (the entrepreneur's family, friends, business angels) and formal investors (large companies that investing their spare funds, pension funds, insurance companies, banks, the government),
  - enable cooperation between different institutions and enterprises, as well as corporate networks and business organizations.

Private equity and venture capital sectors receive support from various organizations interested in the development of entrepreneurship, innovation and high-technology transfers to both starting and operational enterprises (Janasz 2010, p. 124).

Venture capital is used to fund very innovative industries, e.g. biotechnology, IT, pharmaceuticals, medicine, fuel and power industries, communications, media and multimedia, business services, etc. The structure of the VC-supported industries is presented on figure 1.

**Figure 1. Structure of European VC investments by industry, years 2007-2008**

Legend:

1. Medical industry
2. IT
3. Power industry
4. Communications and media
5. Business products
6. Consumer goods – manufacture and retail
7. Business services
8. Consumer services– other
9. Financial services
10. Others
11. Transportation
12. Chemicals and materials
13. Real estate
14. Agriculture
15. Construction.

Source: developed by the author based on the European Private Equity and Venture Capital

Association website,

[http://www.evca.eu/uploadedFiles/Home/Knowledge\\_Center/EVCA\\_Reserach/Statistics/4\\_3\\_Investment/of\\_European\\_inwestments\\_2008.pdf](http://www.evca.eu/uploadedFiles/Home/Knowledge_Center/EVCA_Reserach/Statistics/4_3_Investment/of_European_inwestments_2008.pdf)

Table 2 shows industries attracting private equity and venture capital in Poland.

**Table 2. Structure of private equity and venture capital investments in Poland by industry, years 2007-2008**

€ x 1.000	2007				2008			
	Investments (EUR million)	%	No. of investees	%	Investments (EUR million)	%	No. of investees	%
Business products	138,227	20.2	11	16.9	81,36	13.0	6	9.5
Business services	2,6	0.4	1	1.5	22,568	3.6	3	4.8
Chemicals & materials	875	0.1	1	1.5	0	0.0	0	0.0
Communications and media	11,835	1.7	17	26.2	5,931	0.9	17	27.0
IT	26,263	3.8	5	7.7	19,045	3.0	7	11.1
Construction	12,763	1.9	3	4.6	5,144	0.8	1	1.6
Consumer goods – manufacture and retail	74,716	10.9	6	9.2	142,1	22.6	6	9.5
Consumer services – other	6,261	0.9	4	6.2	1,869	0.3	4	6.3
Power and raw materials	62,04	9.1	2	3.1	56,139	8.9	2	3.2
Financial services	133,462	19.5	8	12.3	45,957	7.3	4	6.3
Medical industry, pharmaceuticals, biotechnology	102,757	15.0	5	7.7	60,463	9.6	6	9.5
Transportation	111,718	16.3	2	3.1	173,37	27.6	3	4.8
Others	0	0.0	0	0.0	14,011	2.2	4	6.3
<b>Total investment</b>	<b>683,518</b>	<b>100</b>	<b>65</b>	<b>100</b>	<b>627,957</b>	<b>100</b>	<b>63</b>	<b>100</b>

Source: the website of the Polish Private Equity Association, [http://www.psik.org.pl-new/rynek\\_private\\_equity\\_2008.php](http://www.psik.org.pl-new/rynek_private_equity_2008.php) The table shows that the most attractive industries for investment were communications, media and IT, medicine and the power industry, while consumer-oriented projects and financial services were less popular in Poland.



The financial efficiency of a venture capital fund is determined by the difference between the price the fund paid to purchase a company and the company's selling price at disinvestment. The difference is measured with the investor's net Internal Rate of Return (IRR), which represents the financial result diminished by fees and commissions that were paid to people handling the investment process. This measure takes account of the time-value of money, which makes it a relatively reliable instrument. The IRR is a discount rate revealing the actual rate of return on the invested capital.

Other measures of economic efficiency that VC funds may employ are the following:

- comparisons of the rates of return generated by the given investment with the rates of return on listed shares,
- distribution to paid-in capital (net profits that the VC fund pays to its investors in relation to the contributed capital),
- total value to paid-in capital,
- residual value to paid-in capital,
- rates of profit generated by the investee-company.

VC funds expect higher rates of return on the early-stage projects, such as seed projects and start-ups (ca. 60%), and lower rates (around 30%) for projects at the expansion stage and in the emerging markets. These expectations arise from the project-related risks. The earlier stage of funding, the higher the risks and the greater expectations of the rate of return (the seed-stage funding is the smallest – only 2-5% of the project value, start-ups are funded up to 10%; while the expansion stage may be granted as much as 40-60% of the necessary funding) (Grzywacz, Okońska 2005).

As reported, Polish enterprises that have become part of VC funds' investment portfolios grow faster, earn high operating profits and show better profitability ratios, thus contributing to the growth of the entire economy, to its innovativeness and to larger GDP (Wrzesińska 2008, pp. 47-51).

Considering that the creation and commercialisation of innovations is important for the economic growth of the country, Europe and the world – the expansion of the VC sector so efficiently funding the introduction of new technologies cannot be overestimated.

Investigations conducted in the European countries and the US confirm that venture capital is important for making economies more innovative. This finding gives special role to the governments that can not only perform the function of an investor, but also stimulate in many ways the activity of institutions related to the VC sector.

As an active player in the venture capital market, the state should launch measures to stimulate the growth of VC funds, such as (Kornasiewicz 2004, p. 226):

- effective government initiatives aiding development of the VC sector,
- government guarantees securing commercial banks' loans for VC funds,
- tax reliefs for individual and institutional shareholders of VC funds,
- smaller tax rates levied on incomes earned on VC transactions,
- information and training campaigns promoting investments in VC funds,
- education and promotion of venture capitalists,
- dissemination of information on venture capital,
- financing innovations through grants and public procurement,
- allowing the Open Pension Funds (OPF) to make VC investments,
- making EU resources available to VC funds.

The major sources of funding that venture capital funds use are similar in Poland and Europe, but in Poland individuals invest in the funds definitely less often for the lack of appropriate inducements. The major obstacles are the lack of solutions related to the capital transactions tax that could promote the creation of innovations, as well as burdensome administrative procedures.

The potential VC beneficiaries in Poland are small innovative enterprises with considerable growth potential that concentrate their efforts on implementing their own innovative ideas and work on new technologies. The SME sector needs better education and a climate fostering entrepreneurship and promoting the existing VC applications. "Among all sources of funding that are available to entrepreneurs, venture capital is probably the most interesting, while being the least understandable" (Wrzesińska 2008, p. 19). Moreover, more flexible laws respecting the development needs of the SME and VC sectors and of the entire Polish economy should be enacted. At present, venture capital funds are partly financed by the European Regional Development Fund and the Krajowy Fundusz Kapitałowy SA (National Capital Fund SA), which is a venture capital fund-of-funds. Public business incubators, clusters, science and technology parks also play an important role in shaping the supply and demand for venture capital.

Activities building on the example of western countries and the pertinent EC's guidelines to promote the development of private equity and venture capital solutions could help Poland create an environment making the country's economy more and more innovative and competitive and thus stimulating its growth.

### **3. Business Angels – informal investors supporting business project implementation**

Business Angels emerged in the Silicon Valley at the dawn of capitalism and then reappeared on Broadway in the 1950s. As far as Poland is concerned, this type of business activity started in the early 1990s.

According to the Polish Agency for Enterprise Development business angels are „...private investors who, having appropriate experience and resources, support small and medium-sized enterprises of their choice, mainly those starting business activity. They share with them their knowledge, experience and technology, as well as financial assets. In exchange, they may have a share in the enterprise's profits. However, some of the investors offer their assistance for free”<sup>1</sup>. Compared with the formal investors, i.e. venture capitalists, business angels become involved on an informal basis. The difference between the two types of investors mainly lies in the sources of capital they use to finance innovative projects.

Business angels have their own funds that they have managed to accumulate during the years they spent doing business, whereas venture capital funds investing in the same projects (frequently of higher value) manage funds that were entrusted to them by other entities (see section 2 of this article).

VC funds and business angels cooperate with each other, as they frequently choose the same projects for investment. As much as 56% of US business angels and 47% of venture capitalists declare that they share investment projects ‘sometimes’; while 15% and 2% of them report frequent cooperation (Akah, Stanco 2005, p. 115).

Business Angels<sup>2</sup> are wealthy individuals who know how to do business and who are ready to take investment risk associated with small start-ups or firms that need funding to expand. They are former entrepreneurs with „a flair for business”. The amounts of funding they usually offer to projects range from PLN 100,000 to 5 million, which represents some 3-5% of their assets<sup>3</sup>. In addition to capital, they bring in their expertise, substantial experience, know-

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<sup>1</sup> PARP (collective work, (2002), *Angielsko-polski słownik terminologiczny programów rozwoju regionalnego*, Warszawa.

<sup>2</sup> More in: Lewandowska L. (2008), *Kapitałowe uwarunkowania rozwoju wysokich technologii w MSP*, [in:] Lachiewicz S., Zakrzewska-Bielawska A. (ed.) *Zarządzanie przedsiębiorstwem w warunkach rozwoju wysokich technologii*, Wyd. PŁ, Łódź, pp. 44-53.

<sup>3</sup> <http://www.lba.pl> (05 Jan. 2010).

how, reliability, business contacts, reputation, partnership and frequently their good name.

Some of them invest to increase their wealth (the expected rates of return depend on many factors and are very diverse; on average, they are 35% in the US, 25% in Europe and 40% in Poland), while others invest with no vested interest at all.

In Poland, every business angel has different motivations and origin. There is a whole range of the non-economic reasons behind their involvement. The most frequent are:

- personal satisfaction,
- fun, hobby, passion,
- to feel elevation because of being part of the given community,
- a need to be useful,
- a sense of social responsibility,
- to return favours that they obtained in the past,
- to impress people they care about,
- a wish to set up a new business,
- to improve their skills,
- a liking for adrenaline,
- to improve their self-image,
- to feel important,
- to do something for themselves (e.g. to overcome idleness),
- other.

Business angels become involved in the so-called high-technology sectors (knowledge-based services, biotechnology, pharmaceuticals, medicine, ecology and environmental protection, communications, the Internet, fuels and power, IT, media and multimedia, automation and robotics) where innovation is risky, but promises high rates of return. Business angels financing projects usually take over newly-issued shares (stocks). In most cases they accept minority shares and sometimes even offer additional loans to make sure that the project has sufficient resources and the entrepreneur maintains a majority share. They do not expect dividends but wait for the company's value to grow over the period of 3-5 years and then sell their shares earning high profits on the investment. They exchange their capital and expertise for a portion of shares. Depending on the amount of capital they committed and their involvement, business angels may earn from 20% to as much as 100%, if the entrepreneur has not contributed financially to the project at all. Business angels want "to be mentors, to participate in

management or to be board members” (Brzozowska 2008, p. 31). With the purchase of shares they acquire the right to decide about the enterprise (as its co-owners).

As mentioned, the projects they finance are very risky. The risk factors are investment duration, the type of the project, the quality of company management, the project’s growth potential and the investee’s financial condition and competitiveness. To reduce risks, they select projects in markets that are known to them. They do not ask experts to assess the project for them, but **make their own decisions** based on their experience. What matters for a business angel is the team (the originator) behind the proposal (this is something the decisive factor). Business angels believe that team’s competencies and team spirit are crucial for the success of the project. These aspects are important indeed, as projects at the seed and start-up stages involve many risks, such as management risk, agency risk, technology risk, market risk, time risk, enterprise valuation risk, as well as risks involved in the project itself.

To lessen the impacts of risks, business angels:

- calculate their expected rates of return according to the following rule: the higher risk, the higher the rate of return,
- phase fund availability over the project development period,
- specify the parties’ contractual rights and obligations,
- monitor project development by co-managing the process.

Another precaution they take is that they diversify their investment portfolio by financing 2 or 5 projects in industries they know.

The Polish business angels have formed national and local networks that allow business angels and entrepreneurs submitting project proposals to communicate, as well as being a resource of practices useful for the prospective business angels.

The major business angel networks in Poland (Matusiak 2009, pp. 278-284) are the following (the numbers in the brackets stand for the membership):

- Bydgoszcz (2003), Polish Business Angels Network – POLBAN (68),
- Katowice (2006) Silesian Business Angels Network – SILBAN (13),
- Krakow (200) Regional Network of Investors and Equity Investments – RESIK (13),
- Krakow (2006) Private Investors Network – SATUS (17),
- Lublin (2007), Lublin Business Angel Network – LSAB (12),
- Szczecin (2009) Business Angel Network – AMBER (5),
- Warsaw (2005) Lewiatan Business Angels LBA (68).

The networks of business angels undertake the following activities:

- ensure a steady inflow of project proposals for investment,
- assess project proposals (their economic and legal credibility),
- appraise project proposals (the figures should be moderate),
- select the project funding structure (to ensure availability of funds),
- negotiate (contractual provisions, types of securities, the roles to be played by the investor and the entrepreneur),
- support business angels,
- realize profits after cooperation ends.

Business angels derive information on investment opportunities from the following sources:

- the national business angel network,
- business associations,
- local business angel networks
- media, accountants, lawyers,
- stock exchange brokers, banks,
- friends, family, personal contacts.

The first contacts between a business angel and an entrepreneur are arranged through the network, but then direct contacts are maintained. The networks also enable contacts with lawyers, analysts and experts when contracts are being drawn up.

A business angel chooses the industry, technical and technological solutions, tax and para-tax advantages, considers the recommendations given by friends and specialists and his or her personal trust in the entrepreneur (based on the person's activity, creativity, patience, involvement, self-discipline, passion, professionalism, experience, contacts, etc.).

For the Polish economy to become more innovative, i.e. more competitive, the knowledge-based enterprises (learning organizations) have to be formed that will develop into innovative enterprises (intelligent organizations). This process requires the expansion of capital markets, including the business angel sector. According to the 2008 EBAN data, 57% of the European business angel networks operated regionally, 17% locally, 24% were nationwide, and 2% conducted international activities. The absolute numbers are shown in table 3.

**Table 3. The numbers of European networks of business angels between 2000 and 2008**

<b>Year</b>	<b>No. of networks</b>	<b>Increase by (%)</b>
2000	132	200
2001	154	117
2002	176	114
2003	196	111
2004	231	118
2005	228	99
2006	211	93
2007	236	112
2008	297	126

Source: developed by the author based on the European Business Angel Network, Statistics compendium using the information provided by business angel networks that responded to the survey conducted in 2008, Brussels 2008.

The United Kingdom, France, Germany, Sweden and Spain account for 75% of business angel networks in the European Union. Table 4 shows the numbers of the networks by country.

**Table 4. Business angel networks in the EU**

Country	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Austria	1	1	1	1	1	1	2	2			
Belgium	4	6	7	7	7	5	6	6			
Czech R.	0	0	0	1	1	2	2	2			
Denmark	0	1	4	6	8	8	8	7			
Finland	1	1	1	1	1	1	1	1			
France	4	13	32	48	48	40	38	35			
Greece	0	0	0	0	0	1	1	1			
Spain	0	1	1	2	3	11	20	21			
Netherlands	1	1	2	2	3	3	5	4			
Ireland	1	1	1	1	3	1	1	1			
Luxembourg	0	0	0	0	0	1	1	1			
Latvia							1	1			
Malta	0	0	0	0	1	1	1	1			
Monaco	0	1	1	1	1	1	0	0			
Germany	1	43	36	40	40	40	43	41			
Norway	0	0	1	1	3	7	7	6			
<b>Poland</b>	0	0	0	0	0	1	2	3	6	6	7
Portugal	0	0	1	1	1	1	1	2			
Russia	0	0	0	0	1	4	4	2			
Slovenia	0	0	1	1	1	1	1	1			
Switzerland	1	3	3	2	3	7	7	7			
Sweden	1	2	2	2	9	28	28	23			
Hungary	0	0	0	0	0	1	1	1			
UK	49	52	48	48	51	51	35	34			
Italy	2	5	12	11	10	12	12	11			
<b>Total</b>	<b>66</b>	<b>132</b>	<b>154</b>	<b>176</b>	<b>196</b>	<b>229</b>	<b>228</b>	<b>214</b>	<b>6</b>	<b>6</b>	<b>7</b>

Source: developed by the author based on Brzozowska K. (2008), Business Angels na rynku kapitałowym. Motywacje, inwestowanie, efekty, Ce De Wu, Warszawa, and Matusiak K.B. (2009), Ośrodki Innowacji i Przedsiębiorczości w Polsce, Raport 2009, PARP, Łódź/Warszawa (Polish data for the years 2007-2009).



In 2008, the Polish business angel networks received projects proposals (Dąbrowska, Matusiak 2009, p. 274) from a group of originators that comprised 49% of experienced entrepreneurs, 14% of research workers under 35 years of age, 14% of doctoral students, 12% of entrepreneurs without previous business experience, 10% of other scientists and 1% of students. Around 60% of the proposals were rejected; this rate is similar to those noted in the other EU member states.

#### **4. Conclusions, reflections, suggestions**

Innovation can be the main engine contributing to faster growth of Polish firms' competitiveness. The progress we have been able to observe so far is still insufficient.

According to scientific studies, innovation is the primary factor stimulating the competitiveness of firms and economies, as well as economic and GDP growth. Moreover, the studies view innovation as a strategic tool that enterprises can use to respond to the leading market forces. Between firm's capacity for innovation and intellectual capital, between its learning capability and entrepreneurship, there is a direct and interrelated connection. However, the capacity for innovation is also determined by various external conditions affecting firms' operations, by the business environment and by the technical, consulting, legal, financial and organizational infrastructure. The institutional and organizational infrastructure allows small firms based in technology parks, pre-incubators, incubators, cluster, etc., to actively participate in global economic processes (glocalization).

To stay in business or to mark their presence in the market, entrepreneurs must constantly pursue innovative solutions. The countries where entrepreneurial freedom is considerable report the largest numbers of innovations. The Heritage Foundation' index of economic freedom (comprising elements such as government intervention in the economy, foreign investments, wages and prices, legal framework, the grey economy, tax burden, monetary policy, banking and finance, ownership rights and trade policy) places Poland in the lower section of the ranking (Hong Kong with 89.7 points is ranked first, while Poland scoring 63.2 is 71st)<sup>4</sup>.

As the funds that the Polish government earmarks for the R+D sector are merely nominal, other solutions should be sought, especially that the European

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<sup>4</sup> The Heritage Foundation, <http://www.heritage.org/index/Ranking> (10 Jan. 2011).

funds should not be expected to provide larger resources in 2011, either. Not only will the EU funding for small enterprise formation be twice smaller, it will also be the last EU funding available. The Labour Fund has also cut its 2011 expenditure on this type of projects.

Considering the circumstances, the Polish government, academic institutions, R+D organizations, firms and innovation transfer centres should urgently:

- create conditions enabling the development of innovating organizations,
- create (or expand) infrastructure facilitating the development of basic and applied research, as well as research&implementation activities,
- support the commercialisation and transfers of innovative technologies,
- introduce instruments giving legal and financial support for the expansion of institutional and capital-providing infrastructure,
- remove barriers constraining stronger activity of the private equity and venture capital funds,
- help the business angels to expand their activities – mainly through tax policy – so that a larger number of innovative firms with growth potential can be financed.

The satisfactory effects of stronger innovation activity that the western economies obtained through private equity and venture capital should encourage the creation of an environment where stronger involvement of the public and private assets in the private equity and venture capital funds would be possible.

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**Streszczenie****VENTURE CAPITAL I BUSINESS ANGELS W KREACJI INNOWACYJNYCH FIRM W POLSCE**

*Artykuł traktuje o innowacjach jako strategicznym instrumencie wzrostu konkurencyjności firm, gospodarki i PKB. Wskazuje na zależność ich rozwoju od warunków mikro i makroekonomicznych, w tym na infrastrukturę techniczną, instytucjonalną, legislacyjną, kapitałową i inną, stanowiącą otoczenie biznesu.*

*W szczególności prezentuje Private Equity/Venture Capital i Business Angels jako najbardziej interesujące źródła finansowania innowacyjnych o wysokim stopniu ryzyka przedsięwzięć. Instytucje te – oprócz kapitału – służą swoją wiedzą, know-how, kontaktami biznesowymi oraz aktywnym uczestnictwem w zarządzaniu inwestowanym projektem. Są ze swej natury predestynowane do stymulowania innowacji i czerpania z tego tytułu relatywnie wysokich stóp zwrotu z zaangażowanego kapitału.*

*W artykule zasygnalizowano również potrzebę kreowania uwarunkowań sprzyjających rozwojowi opisanych form finansowania przedsiębiorczości, innowacyjności i dynamicznego otoczenia generującego zdolności innowacyjne.*